

REMARKS

Claims 1, 2, 14, 15 and 24 have been amended to improve form. No new matter has been added. Claims 1-39 remain pending.

Claims 1, 2, 4-6, 8-14, 16-21, 23-26, 28-31, 34-36, 38 and 39 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Or et al. (U.S. Patent Application Publication No. 2002/0067742; hereinafter Or) in view of Bowman-Amuah (U.S. Patent No. 6,556,659) and further in view of Turtiainen et al. (U.S. Patent Application Publication No. 2002/0059516; hereinafter Turtiainen). The rejection is respectfully traversed.

Claim 1, as amended, recites a method that includes periodically polling the gateway device to obtain operating parameters related to communications between the first and second networks, the operating parameters including at least two of information identifying Internet Key Exchange security associations (IKE SAs) no longer being used, information identifying a number of toggles between an active card and a standby card in the gateway device, or information identifying processor utilization in the gateway device. None of the cited references discloses or suggests these features.

For example, the Office Action states that Or discloses polling a WAP gateway to obtain information corresponding to the claimed information and points to Fig. 1 and paragraphs 6-8 for support (Office Action - page 7). As discussed in the previous response, Or at paragraphs 6-8 discloses defining a management system for network devices, such as routers or gateways, that includes an agent process for collecting data and information about the network device being managed (Or - paragraph 6). Or at paragraphs 6-8 also discloses that the collected data is stored in a central database and the management process is able to perform various actions to collect and report the data according to a management information base

(MIB) (Or - paragraph 7). This portion of Or further discloses that the use of the MIB enables network operators to configure network devices, determine the state of the network devices, change one or more parameters of the network devices and reboot network devices exhibiting suspicious behavior (Or - paragraph 8). This portion of Or, or any other portion, does not disclose or suggest periodically polling the gateway device to obtain operating parameters related to the communications between the first and second networks, where the operating parameters include at least two of information identifying Internet Key Exchange security associations (IKE SAs) no longer being used, information identifying a number of toggles between an active card and a standby card in the gateway device, or information identifying processor utilization in the gateway device, as recited in claim 1.

In response to similar arguments made in the previous response, the Office Action points to Or as disclosing that SNMP implements a collecting agent to collect specific types of data and information about a network device and points to the Abstract and paragraphs 2-6 of Or for support (Office Action page 3). These portions of Or, however, do not disclose or suggest polling a gateway device to obtain any of the specific information recited in claim 1 and discussed above (i.e., at least two of information identifying Internet Key Exchange security associations (IKE SAs) no longer being used, information identifying a number of toggles between an active card and a standby card in the gateway device, or information identifying processor utilization in the gateway device).

The Office Action, however, states that Bowman-Amuah discloses service level management in a hybrid network architecture in which performance and service quality levels are managed in an attempt to meet SLA and QoS standards (Office Action - page 3). The Office Action further states that when performing the service level management, Bowman-

Amuah discloses status reports, problem reports and/or outage notifications, “where performance capacity (i.e. node throughput) and utilization (i.e. processor utilization)” are among the parameters being monitored and points to the Abstract and Figs. 1B-1F of Bowman-Amuah for support (Office Action - page 3). The applicants respectfully disagree.

Bowman-Amuah may disclose a service level management system that generates status reports, problem reports and outage notifications (Bowman-Amuah - Abstract). This portion of Bowman-Amuah, however, does not disclose or suggest polling a gateway device to obtain any of the specific information recited in claim 1. For example, the Office Action indicates that utilization referred to in Figs. 1B-1F of Bowman-Amuah correspond to processor utilization (Office Action - page 3). The applicants respectfully disagree.

Network data management 130 of Bowman-Amuah collects usage data and events for the purpose of network performance and traffic analysis (Bowman-Amuah - col. 21, lines 62-66). Determining network performance and traffic analysis is not equivalent to determining processor utilization in a gateway device, as alleged in the Office Action. Figs. 1B-1F of Bowman-Amuah illustrate that network data management 130 determines some metric regarding capacity and utilization. However, no portion of Bowman-Amuah discloses that the utilization referred to in Figs. 1B-1F corresponds to processor utilization. In contrast, Bowman-Amuah discloses determining utilization associated with a network (Bowman-Amuah - col. 21, lines 62-66 and col. 42, lines 46-68). Therefore, Bowman-Amuah does not disclose or suggest periodically polling a gateway device to obtain information identifying processor utilization in a gateway device, as recited in claim 1.

The Office Action also states that Bowman-Amuah discloses generating a health report related to a gateway device, where the health report is based on the analysis of the operating

parameters and points to the abstract and col. 48, line 52 to col. 50, line 67 for support (Office Action - page 7). As discussed in the previous response, Bowman-Amuah at col. 48, line 52 to col. 50, line 67 discloses that the next generation network (NGN) operations architecture specifies collection for network wide events that feed the fault management system. These portions of Bowman-Amuah, however, do not disclose or suggest periodically polling the gateway device to obtain operating parameters related to the communications between the first and second networks, where the operating parameters include at least two of information identifying Internet Key Exchange security associations (IKE SAs) no longer being used, information identifying a number of toggles between an active card and a standby card in the gateway device or information identifying processor utilization in the gateway device, as recited in claim 1. Therefore, these portions of Bowman-Amuah cannot disclose or suggest analyzing the operating parameters and generating a health report based upon analysis of the operating parameters, as further required by claim 1.

The Office Action admits that the combination of Or and Bowman-Amuah does not disclose that the operating parameters include information identifying Internet Key Exchange security associations (IK SAs) no longer being used (Office Action - page 7). The Office Action, however, states that Turtiainen discloses this feature and points to paragraph 4 of Turtiainen for support (Office Action - page 8). The applicants respectfully disagree.

Turtiainen discloses a method of sending streamed data over an IP network (Turtiainen - Abstract). Turtiainen at paragraph 4 discloses that to allow IPSec packets to be properly encapsulated and decapsulated, it is necessary to associate security services and a key between the traffic being transmitted and the remote node which is the intended recipient. This portion of Turtiainen further discloses that the construct used for this purpose is a Security Association

(SA) which may be negotiated between peer nodes using IKE. This portion of Turtiainen also discloses that details of existing SAs and their respective security parameter indices (SPIs) are maintained in a security association database (SAD) which is associated with each IPsec node. The mere fact that Turtiainen discloses that details of existing SAs and their SPIs is maintained in a SAD does not correspond to any of the features recited in claim 1. That is, Turtiainen does not disclose or suggest polling a gateway device to obtain operating parameters that include information identifying IKE SAs no longer being used. In contrast, Turtiainen merely discloses storing SAs and SPIs used to communicate between nodes. No portion of Turtiainen discloses storing IKE SAs no longer being used, as recited in claim 1.

Therefore, the combination of Or, Bowman-Amuah and Turtiainen does not disclose or suggest periodically polling the gateway device to obtain any of the claimed operating parameters related to communications between the first and second networks, much less that the operating parameters include at least two of information identifying Internet Key Exchange security associations (IKE SAs) no longer being used, information identifying a number of toggles between an active card and a standby card in the gateway device, or information identifying processor utilization in the gateway device, as recited in claim 1.

For at least these reasons, withdrawal of the rejection and allowance of claim 1 are respectfully requested.

Claims 2, 4-6 and 8-13 depend on claim 1 and are believed to be allowable for at least the reasons claim 1 is allowable. Accordingly, withdrawal of the rejection and allowance of claims 2, 4-6 and 8-13 are respectfully requested.

Claim 14 recites a method that includes periodically polling, via a network device, an inter-network gateway to collect data related to the inter-network gateway, the data including

at least two of information related to a flowcache to store connection information, information identifying a number of virtual private routed networks, or information identifying a number of internet key exchange security associations not being used.

The Office Action states that Or discloses polling the gateway device to obtain operating parameters related to a flowcache and points to paragraph 25 of Or for support (Office Action - pages 11-12). The applicants respectfully disagree.

Or at paragraph 25 discloses that each WAP gateway must support the operation of the MIB at least with regard to the IP tables of the database. This portion of Or does not disclose or suggest periodically polling the WAP gateway to obtain any information, much less information related to a flowcache to store connection information.

The Office Action with respect to claim 6 states that Turtiainen discloses obtaining node configuration information identifying a number of virtual private routed network connections and points to paragraphs 2-4 of Turtiainen for support (Office Action - page 9). The applicants respectfully disagree. The applicants will assume for the sake of argument that these same portions of Turtiainen is alleged to disclose the similar features recited in claim 14.

Turtiainen at paragraphs 2-4 discloses that a VPN may involve one or more corporate LANs or intranets, as well as users coupled to foreign LANs, the Internet or wireless mobile networks. This portion of Turtiainen also discloses that details of existing SAs and their respective SPIs are maintained in a SAD, which is associated with each IPSec node. Therefore, while Turtiainen may disclose the use of VPNs, Turtiainen does not disclose or suggest polling an inter-network gateway to obtain information identifying a number of virtual private routed networks, as recited in claim 14.

In addition, similar to the discussion above with respect to claim 1, Turtiainen does not disclose or suggest periodically polling an inter-network gateway to obtain information identifying a number of IKE SAs not being used, as recited in claim 14.

Since the combination of Or, Bowman-Amuah and Turtiainen does not disclose or suggest periodically polling, via a network device, an inter-network gateway to collect any of the data recited in claim 14, the combination cannot disclose or suggest polling an inter-network gateway to obtain data that includes at least two of information related to a flowcache to store connection information, information identifying a number of virtual private routed networks, or information identifying a number of internet key exchange security association not being used, as recited in claim 14.

For at least these reasons, the combination of Or, Bowman-Amuah and Turtiainen does not disclose or suggest each of the features of claim 14. Accordingly, withdrawal of the rejection and allowance of claim 14 are respectfully requested.

Claims 16-21 and 23 depend on claim 14 and are believed to be allowable for at least the reasons claim 14 is allowable. In addition, these claims recite additional features not disclosed by the cited art.

For example, claim 19 recites that the parameters comprise statistics related to flows, predicted flows, connections, conversations and packets. The Office Action states that Bowman-Amuah this feature and points to the Abstract and Figs. 1B-1F for support (Office Action - page 13). The applicants respectfully disagree.

As discussed above with respect to claim 1, Bowman-Amuah may disclose a service level management system that generates status reports, problem reports and outage notifications (Bowman-Amuah - Abstract). This portion of Bowman-Amuah, however, does

not disclose or suggest processing data to generate a number of parameters that correspond to the parameters recited in claim 19. Figs. 1B-1F of Bowman-Amuah illustrate that network data management 130 collects usage data and events for the purpose of network performance and traffic analysis (Bowman - Amuah - col. 21, lines 62-66). Figs. 1B-1F of Bowman-Amuah also illustrate that network data management 130 determines some metric regarding capacity and utilization. However, no portion of Bowman-Amuah discloses or suggests generating a number of parameters that comprise statistics related to flows, predicted flows, connections, conversations and packets, as specifically recited in claim 19.

For at least these additional reasons, withdrawal of the rejection and allowance of claim 19 are respectfully requested.

Claim 24 recites that a computer readable memory that includes computer program code to automatically, periodically poll a plurality of inter-network gateways to collect data related to the plurality of inter-network gateways, the data identifying at least two of information associated with a flowcache to store connection information, information identifying a number of virtual private routed network networks, or information identifying a number of dead internet key exchange security associations.

Similar to the discussion above with respect to claim 14, the combination of Or, Bowman-Amuah and Turtiainen does not disclose or suggest these features. Accordingly, withdrawal of the rejection and allowance of claim 24 are respectfully requested.

Claims 25, 26 and 28-30 depend on claim 24 and are believed to be allowable for at least the reasons claim 24 is allowable. Accordingly, withdrawal of the rejection and allowance of claims 25, 26 and 28-30 are respectfully requested.

Claim 31 recites an apparatus that includes a processor to periodically poll an inter-network gateway through the interface mechanism to collect data related to the inter-network gateway, the data including at least two of information identifying a number of Internet Key Exchange security associations (IKE SAs) no longer being used, information identifying node throughput, information identifying a number of toggles between an active card and a standby card in the inter-network gateway or information identifying processor utilization in the inter-network gateway.

Similar to the discussion above with respect to claim 1, the combination of Or and Bowman-Amuah and Turtiainen does not disclose or suggest a processor that polls an inter-network gateway to collect data that includes information identifying a number of Internet Key Exchange security associations (IKE SAs) no longer being used, information identifying a number of toggles between an active card and a standby card in the inter-network gateway or information identifying processor utilization in the inter-network gateway.

The combination also does not disclose or suggest a processor that polls an inter-network gateway to collect data that includes information identifying node throughput, as recited in claim 31. As discussed above with respect to claim 1, Bowman-Amuah discloses that network data management 130 collects usage data and events for the purpose of network performance and traffic analysis (Bowman-Amuah - col. 21, lines 62-66). Determining network performance and traffic analysis is not equivalent to identifying node throughput as recited in claim 31.

Therefore, the combination of Or, Bowman-Amuah and Turtiainen cannot disclose or suggest a processor to poll an inter-network gateway to collect data including at least two of information identifying a number of Internet Key Exchange security associations (IKE SAs) no

longer being used, information identifying node throughput, information identifying a number of toggles between an active card and a standby card in the inter-network gateway or information identifying processor utilization in the inter-network gateway, as recited in claim 31. Accordingly, withdrawal of the rejection and allowance of claim 31 are respectfully requested.

Claims 34-36, 38 and 39 depend on claim 31 and are believed to be allowable for at least the reasons claim 31 is allowable. Initially, the applicants note that claims 34-36 depend on claim 32, which was rejected based on the combination of Or, Bowman-Amuah, Turtiainen and Gray. Therefore, clarification as to the grounds of rejection for claims 34-36 are respectfully requested for any subsequent communication.

In any event, these claims recite additional features not disclosed by the cited art. For example, claim 35 recites features similar to claim 19. For reasons similar to those discussed above with respect to claim 19, withdrawal of the rejection and allowance of claim 35 are respectfully requested.

Claims 3, 7, 15, 21, 22, 27, 32, 33 and 37 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Or in view of Bowman-Amuah and Turtiainen and further in view of Gray (U.S. Patent Application Publication No. 2008/0189353; hereinafter Gray). The rejection is respectfully traversed.

Claims 3, 7, 15, 21, 22, 27, 32, 33 and 37 variously depend on claims 1, 14, 24 and 31 and are believed to be allowable for at least the reasons their respective independent claims are allowable. In addition, these claims recite additional features not disclosed by the cited art.

For example, claim 3 recites that the polling of the gateway device to obtain operating parameters comprises obtaining information identifying IKE SAs no longer being used. The

Office Action states that Gray discloses obtaining operating parameters that comprises information related to internet key exchange security associations and points to paragraph 43 for support (Office Action - page 16). The applicants respectfully disagree.

As discussed in the previous response, Gray at paragraph 43 discloses that INE 170 receives information that is indicative of nodes 150 and 151 having exchanged cryptographic keys, as an Internet Key Exchange (IKE). INE 170 may then infer an IPSec tunnel exists between nodes 150 and 151. This portion of Gray, or any other portion of Gray, does not disclose or suggest polling the gateway device to obtain operating parameters that include information identifying IKE SAs no longer being used, as recited in claim 3.

The applicants note that Turtiainen was also alleged to disclose the feature recited in claim 3 (Office Action - page 8). However, as discussed above with respect to claim 1, Turtiainen also does not disclose or suggest polling a gateway device to obtain operating parameters that include information identifying IKE SAs no longer being used, as recited in claim 3.

Claims 21 and 37 recite features similar to claim 3 and are believed to be allowable for reasons similar to those discussed above with respect to claim 3. Accordingly, for these additional reasons, withdrawal of the rejection and allowance of claims 3, 21 and 37 are respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, the applicants respectfully request withdrawal of the outstanding rejections and the timely allowance of this application. In addition, as the applicants' remarks with respect to the Examiner's rejection are sufficient to

overcome this rejection, the applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, assertions as to dependent claims, etc.) is not a concession by the applicants that such assertions are accurate or such requirements have been met, and the applicants reserve the right to analyze and dispute such in the future.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-4752 and please credit any excess fees to such deposit account.

Respectfully submitted,

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